



1949

Relationship of School Background to Reading Ability of One Hundred Disabled Readers

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Recommended Citation

Nolan, Mary Loretta, "Relationship of School Background to Reading Ability of One Hundred Disabled Readers" (1949). *Master's Theses*. Paper 787.
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RELATIONSHIP OF SCHOOL BACKGROUND TO READING ABILITY
OF ONE HUNDRED DISABLED READERS

By

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A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF MASTER OF ARTS IN LOYOLA UNIVERSITY

February

1949

VITA

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TABLE OF CONTENTS

CHAPTER	PAGE
I. RELATIONSHIP OF SCHOOL BACKGROUND TO READING ABILITY.	1
II. SOME BASIC STUDIES ON REMEDIAL READING . Gates - Monroe - Judd - Durrell - Kellar and Fernald -	4
III. METHOD AND PROCEDURE OF PRESENT STUDY. .	12
IV. ANALYSIS OF FINDINGS. Grade Placement - Intelligence Quotients - Mental Ages - Reading Indices - Transfers and Grade Repetitions of Disabled Readers and Comparison Group	18
V. SUMMARY AND CONCLUSIONS.	39
BIBLIOGRAPHY.	42
APPENDIX.	43

LIST OF TABLES

TABLE		PAGE
I	Grade Placement at Time of Examination.	19
II	Distribution of Intelligence Quotients of 100 Disabled Readers.	21
III	Distribution of Mental Ages of 100 Disabled Readers.	23
IV	Distribution of Reading Indices of 100 Disabled Readers	25
V	Distribution of the School Placements of 100 Disabled Readers and Comparison Group of 100.	28
VI	Distribution of School Placements and Transfers of 100 Disabled Readers and Comparison Group of 100	30
VII	Distribution of Repetition of Grades Among the Disabled Readers and Normal Readers According to I.Q. Groupings . .	32
VIII	Sample Cases Showing the Shifting Discrepancy between Silent and Oral Reading Scores, Including Intelligence Test Data and Spelling Scores for Comparison	37

CHAPTER I

RELATIONSHIP OF SCHOOL BACKGROUND TO READING ABILITY

Acute problems arising from the inability to read loom large in the schools throughout America today. Because of this inability many children are not only considered deficient but mentally retarded. In consequence, the present investigation has been undertaken to determine whether or not there exists a relationship between the school background* and the reading disability that would either cause or correct the difficulty.

Educational leaders consider a disabled reader to be one who is so seriously retarded in reading that he is incapable of progressing satisfactorily in any subject that requires reading. This defect is such that a pupil whose I.Q. would seem to warrant normal progress is retarded several years, not only in reading, but in all subjects which demand reading skills.

Are disabled readers less frequent among those who are promoted regularly than among those who repeated grades? Do disabled readers show a more irregular school history in terms

*The school background includes age at entrance, grade repetition, number of transfers, et cetera

of transfers and grades repeated than is shown in comparison cases where reading disability is not a conspicuous factor? Are there discrepancies between the arithmetic computation score of a disabled reader and his reading average?

These and similar queries are developed in the pursuit of this study. It must be remembered that the present investigation does not attempt to consider any problem other than that of the school background of one hundred disabled readers. It does not concern itself with the analysis of reading disabilities, the development of remedial instruction, or physiological elements involved in reading, with therapy or methods for correcting the difficulties of retarded readers. It deals primarily with the problem of the school background of the individuals studied, with a view to answering, if possible, the following questions:

1. Is the disabled reader found more frequently among normal, superior, or dull children in this group of retarded readers?
2. What percentage of the children who failed in first grade were too immature mentally on entering first grade? How do they compare with comparison cases where reading disability is not a conspicuous element?

In undertaking this study it is assumed that grade repetition, transfers from one school to another, variations in mental ages, all constituting the educational background of the child, have a definite influence upon the reading ability or disability of the individual.

The subjects for this study were selected from among the records of clinical cases found in the files of the Loyola Child Guidance Center, Chicago, Illinois. The intelligence scores were all derived from the Revised Stanford-Binet Scale, which had been administered for psychological study. In two other areas uniform tests were administered to all. Gray's Standardized Oral Reading Paragraphs and Ayres Spelling Scale supplied the data for the oral reading and spelling information. However, in silent reading and arithmetic computation, because of the wide range of grade placement and mental ages of the children tested, it was impossible to use the same tests on all. The psychologist selected tests of silent reading on the bases of the findings of the psychological examination. New Stanford Reading Tests, Forms V, W, Y, and Z, Stanford Reading Tests, Primary D and E, Metropolitan Reading Test, Primary I and II, Gates Primary Type I and III, Form 2 supplied the material for the silent reading tests. From all the above data a Reading Index was calculated. It is possible that this index does not show the same precision as if all individuals could have been given the entire identical battery of tests. However, since the tests in this study were carefully selected for each individual, this wide sample of tests proved to give good workable results.

CHAPTER II

SOME BASIC STUDIES ON REMEDIAL READING

In an effort to force attention on the problems involved in remedial reading, numerous investigations in the analyses of reading disabilities, development of remedial instruction, and the study of physiological factors, which may cause reading difficulties have been made. The purpose of such investigations has been to create a remedy for these deficiencies, to provide remedial instruction, and to help overcome structural and functional limitations which may cause reading disability among children.

Articles in educational journals, it would seem, distinguish three types of procedure: the objective, the physiological, and the psychological. In some of these, as well as in the more extensive studies by such eminent educators as Gates, Monroe, Durrell, Judd, and others, all three types are discussed. In several instances a single study treats of the objective, the physiological, and the psychological.

Gates'¹ early study, The Improvement of Reading, primarily objective in treatment, emphasizes specific material for remedial work whereby errors made by children can be determined

¹Arthur I. Gates, The Improvement of Reading, New York, The Macmillan Company, 1935, 668

and possible correction of difficulties may be realized. He likewise treats of certain psychological defects resulting in difficulties in word recognition:

- (1) inferior mental capacity
- (2) lack of general experience or experiences in using oral English
- (3) study limited to unusual vocabulary
- (4) lack of training in word recognition
- (5) inappropriate methods of perceiving words and learning new words
- (6) visual difficulties
- (7) auditory difficulties
- (8) inappropriate direction of perceptual attack

With application to extreme cases Gates states: "Visualization of word wholes and word parts seems to be of clear value in certain cases, but difficult for many non-readers to adopt in the beginning stages." Furthermore, he believes that "it is often advantageous to invest a moderate amount of time and effort in the attempt to teach the pupils to visualize." Elsewhere he says that some degree of phonetic work, tracing, and writing may be highly useful.²

In a somewhat detailed treatment of a child's habits and errors in reading, Gates secured additional evidence of deficiencies in word recognition. Two of his conclusions are:

- (1) The poor readers seem to react to the word vaguely as a whole, or to react chiefly to

²Ibid., 452-453

certain parts of a word (usually the first part) or at least fail to perceive certain significant features of words.

- (2) The poor readers usually have no satisfactory method of attacking a new or difficult word. Many of them were quite helpless when they could not recognize the word correctly at a glance.³

A pioneer in the field, Marion Monroe, after extensive work with remedial reading cases, is of the opinion that "a child may fail to learn to read and yet be of adequate intelligence."⁴ Such children, she maintains, "may be regarded as having a special defect. Such defect, if persistent, usually prevents the child from making progress in school and ultimately blocks the possibility of his preparation for an economic position in keeping with his other capacities."⁵

Remedial work, as described by Monroe, comes under two main headings:

- (1) An analysis of disability, which includes:
- (a) the educational profile
 - (b) the reading index
 - (c) the profile of errors
 - (d) test of various discriminations involved in reading

³Arthur I Gates, "The Psychology of Reading and Spelling," Teachers College Contributions to Education, No. 129, New York, Teachers College, Columbia University, 1922, viii + 108

⁴Marion Monroe, Children Who Cannot Read, Chicago, University of Chicago Press, 1932, 1

⁵Ibid., 1

(e) the social, physical, psychological, and psychiatric--the clinical data--recording the child's reading problems

- (2) The use of methods that will correct the specific disabilities⁶

The remedial instruction suggested to meet these limitations consists in a series of drills and exercises that would give the child the skills in which the diagnostic test has shown him to be deficient.

In an analytical study of eye-movement records of children Judd⁷ found that poor readers recognized some words quickly and accurately during single fixations. Records of the same readers revealed serious difficulties and periods of confusion. Observing one third grade record, he comments: "The child is evidently compelled to make the greatest efforts before he can master the words; he moves his eyes about restlessly trying, by getting different views, to recognize the complex letters." Judd also brings out the need for training in the orderly analysis of words:

We have found grounds in earlier records for the statement that training enlarges the unit of recognition. We have here come on evidence which shows us the necessity of teaching analysis. There is a demand in many cases for a smaller unit than the word. Unless the school trains the pupil to work out his words systematically, he will do it badly and will exhibit confusion.⁸

⁶Ibid., 111

⁷Charles Hubbard Judd, and others, Reading: Its Nature and Development, Supplementary Educational Monographs, Vol. II, No. 4, Chicago, Department of Education, University of Chicago, 1918, XIV + 192

⁸Ibid., 60

For the purpose of providing instruction for teachers Durrell's analysis of reading difficulties includes the following:

- (1) examination for physical and sensory defects
- (2) measuring capacity for reading
- (3) educational analysis of reading difficulties
- (4) general scope of analysis
- (5) physical conditions and time
- (6) check list of difficulties⁹

The teacher according to Durrell should be able to discern these characteristics in an effective reading program which would coincide with his own teaching practices. Such an ideal program would contain specifications indicating that:

- (1) the teacher is familiar with the individual differences of pupils
- (2) the teacher has specific objectives for each child or each group of children in her class
- (3) there is definite plan for observation of pupil's growth in vocabulary reading habits
- (4) the teacher knows the books that are available to the children
- (5) there is adequate provision for differences in the reading of the pupils
- (6) the teacher has definite plans for motivation of reading

⁹Donald Durrell, Improvement of Basic Reading Abilities, Yonkers-on-Hudson, New York, World Book Company, 1940, 197-304

- (7) there is full attention to growth in vocabulary
- (8) oral-reading instruction is made effective by maintaining interest
- (9) the instruction in silent-reading is characterized by insight into many problems and needs
- (10) there is training in oral and written recall
- (11) there is definite instruction for improvement of study skills¹⁰

The uniform reading assignment for an entire class was found by Durrell to be, perhaps, the most outstanding obstacle in establishing permanent reading habits among the slow learners. This is particularly true of content subjects in which the slow learner experiences constant failure and dissatisfaction. The superior pupil, on the other hand, is content with fragmentary knowledge acquired with little or no effort on his part. Another disadvantage of uniform assignments is the minimizing of habits of initiative and self-direction. "Sampling" might also be considered an adverse influence on reading habits since each content subject, as history, geography, and science, is treated in texts "which may devote one column to the Belgian Congo, a half-chapter to the Reconstruction Period, and three paragraphs to the four-cycle engine."¹¹ Interest in school subjects can be motivated by a planned correlation of all subjects. The child should be able to see an association between his learning and his living.

¹⁰Ibid., 4-10

¹¹Ibid., 13

To provide for a wide range of individual reading is the duty of every member of the school staff. The terms "range" and "individual" carry weighty significance in this regard, because, if a pupil is not reading within his own level of comprehension, the matter is lost to him, the interest dwindles, and the power and pleasure and practicality of good reading have passed him by. To put this power and pleasure and practicality within the grasp of all pupils, Durrell advocates the use of the problem method and unit assignment.

Among the various types of poor readers probably the most striking are those of normal mentality who, after one or more years of instruction, have practically no ability to recognize the printed word and who profit very little by intensive application of the usual method of instruction in reading. In the diagnosis of individual cases brought to our attention we have found this type to occur not infrequently. For a time, remedial work with other types of poor readers was set aside so that we might concentrate our efforts upon securing accurate and reliable data, and eventually a teaching method for these non-readers. The subjects diagnosed in our work have been, in many instances, strongly motor. Several have possessed exceptional ability in drawing and handwork; one who was talented in music played the piano with unusual skill. These children seem to have made no association whatever between sounds and their printed symbol, though they have no difficulty in repeating sounds or words after the teacher gives them. Most of the non-readers lack confidence in themselves, evince no interest in reading, are unable to concentrate, and seem nervous and unstable in every way. Due to months of practice they have developed a tendency to guess at words, to memorize sentences and stories, and to use many other means of camouflaging their deficiency.¹²

¹²Helen B. Kellar and Grace B. Fernald, "Remedial Work for Non-Readers," The Second Yearbook of Department of Elementary School Principals, Vol. II, No. 4, 1923, 338

What a vast amount of work has been accomplished in the psychology of reading and in the analysis of reading difficulties is evident even from studies mentioned in this chapter. The school history of the disabled reader was touched upon in many instances. Yet--on the other hand, no one apparently has made a detailed study on the problem of the school background, though some have alluded to the frequency of transfer and of absence from school as contributing factors in reading disability cases. It is hoped that the results of the present study will definitely show that the school background affects for better or for worse the school progress of retarded readers.

CHAPTER III

METHOD AND PROCEDURE OF PRESENT STUDY

As already stated, this study was made possible through the use of records of one hundred clinical cases from the files of the Loyola Child Guidance Center. Each case was selected within a chronological age group ranging from eight-years to 14-11 and having intelligence quotients between 75-128. Thus the feeble-minded were excluded at the lower level. The upper limit was set so as to include several disabled readers in the 120-129 bracket. A sample from this latter group is Robert whose story is summarized below:

Robert was entering his sixth school when he was referred to the Loyola Center. These schools included three public in the city and suburbs, and two parish schools.

It is possible that this frequent change of schools prevented anyone from recognizing or discovering his difficulty. More probably, however, too much emphasis was placed on the fact that the only other child in the family was feeble-minded. Teachers and parents alike may have supposed that Robert belonged in the same category. It seems that his social surroundings brought only discouragement and defeat. His father did not understand the reason for Robert's retardation and failed to recognize the boy's sincere efforts.

It is not a simple matter to overcome circumstances that arise when one's sincere endeavors are made insignificant by the perfection expected by one's father.

His inability to read along with his feelings of discouragement and defeat, caused by unjust and humiliating criticisms, increased his feelings of inadequacy. These factors and his social surroundings added to his lack of self-confidence and deepened his feelings of insecurity and inferiority in coping with school assignments.

Since Robert failed in fifth grade not only in reading and spelling but also in most of the content subjects: English, history, religion, and geography, he was brought to the Center for a psychological examination.

The Revised Stanford-Binet gave the following results: chronological age 11-0, mental age 13-9, and an intelligence quotient of 125. As can be seen, Robert had adequate intelligence to learn to read but for some reason or other his achievements, which are given in detail below, fell far short of his expectancy. It was evident that Robert was in need of tutorial work. Accordingly fifty or sixty hours of tutoring were provided which improved his reading ability, and partially restored his self-confidence through praise and increased ability in school work.

The following is a detailed summary of Robert's achievements before and after his tutorial work:

Retest of Achievements	Aug. 1945	Sept. 1946	Gain
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Reading

New Stanford	Form Z	Form W	
Paragraph Meaning	4.4	6.4	plus 2.0
Word Meaning	4.0	5.3	plus 1.3
Gray's Oral	3.6	3.9	plus 0.3

Spelling

Ayres Written	3.0	3.8	plus 0.8
Oral	3.0	3.9	plus 0.9

Arithmetic

New Stanford	Form W	Form Y	
Reasoning	6.1	7.9	plus 1.8
Computation	5.8	6.8	plus 1.0

After six months of tutoring with a short interval between, the records disclosed that Robert's paragraph achievement had increased two grades, his word meaning 1.3 of a grade, and his oral reading .3 of a grade. This reading improvement resulted not only in a steady progression in class work, but also, and more important to the child, it gave him an entirely new attitude toward tasks assigned him. It is also interesting to note that a short period of individual tutoring along with proper motivation and encouragement can increase reading ability and improve arithmetic scores as is shown in Robert's case.

There will be frequent mention in the paragraphs that follow of the reading index for the cases in this study. The reading index is the quotient of the reading achievement divided by the reading expectancy grade. The divisor or

expectancy score is the average of the chronological age, mental age, and the grade on the arithmetic computation test, all expressed in terms of grade level, not of age. The reading achievement score is likewise calculated in grade level and is the average of the oral reading score and whatever silent reading scores are available for the individual.

The procedure of calculating the reading index may be exemplified from Robert's case reported above.

<u>Expectancy</u>	<u>Grade Equivalent</u>	<u>Achievement</u>	<u>Grade</u>
C.A. 11-0	6.0	Gray's Oral	3.6
M.A. 13-9	8.8	Paragraph Meaning	4.4
Arith. Comput.	5.8	Word Meaning	4.0
	<u>3)20.6</u>		<u>3)12.0</u>
Grade Expectancy	6.87 (6.9)	Reading Achievement	4.0

$$\text{Reading Index} = \frac{\text{Reading Achievement}}{\text{Reading Expectancy}} = \frac{4.0}{6.9} = .58$$

This provided a method to determine the degree of retardation or acceleration in reading. In general a reading index below .80 is a reasonable indication of a degree of reading disability which calls for remedial instruction.

As in Robert's case above, a rather full record of personal and family history was available for all one hundred cases. Likewise information on the number of grades repeated, schools attended, mental ages, intelligence quotients, and achievement scores was available for each case.

The Revised Stanford-Binet Scale furnished the means for measuring the mental ages from which the intelligence quotients

were derived, while the child's composite reading grade was obtained from among the following tests. For oral reading the (a) Gray's Standardized Oral Reading Paragraphs¹ were used. This selection was made because the test primarily shows the extent of the child's mastery over the mechanics of reading. It reveals especially mispronunciation--partial and complete--omissions, substitutions, insertions, and repetitions. Mastery is determined by the rate and accuracy with which the child reads.

The psychologist has a good general knowledge of the child's reading status before selecting the silent reading tests. She has the parent's report on the child, the school's report, the child's linguistic performance on the items in the Stanford-Binet and the child's response on the Gray's Oral Tests. This information enables the psychologist to make a suitable selection of silent reading tests from among the following. (b) New Stanford Reading Tests,² (c) Stanford Reading Tests: Primary D and E,³ (d) Metropolitan Reading Tests: Primary I and II,⁴ (e) Gates Primary Type I and III: Form 2.⁵ The results of the battery of reading tests were

¹William Gray, Standardized Oral Reading Paragraphs, Public School Publishing Company, Bloomington, Illinois

²Truman Kelly, Giles Buch, and Lewis Terman, New Stanford Reading Tests: Forms V, W, Y, and Z, World Book Company, New York, 1929

³Ibid., Stanford Reading Test: Primary D and E, 1940

⁴Gertrude Hildreth, Metropolitan Reading Tests: Primary I and II, World Book Company, Yonkers-on-Hudson, New York, 1940

⁵Arthur I. Gates, Gates Primary Type I and III, Bureau of Publications, Teachers College, Columbia University, New York

combined into a single score, thus indicating a reading age or a reading grade.

Spelling scores reported herein were obtained from the Ayres Oral and Written Scale as presented by Marion Monroe.⁶

In addition to compiling the above data for the disabled readers, similar data were compiled for one hundred comparison cases where reading disability was not a conspicuous factor. These cases were selected on the bases of intelligence quotients, chronological and mental ages corresponding with those of the disabled reader. This comparison was made to find whether the disabled reader had a more irregular school history in terms of transfers and grades repeated than the comparison cases.

After the administration and tabulation of scores, individual data sheets were prepared to show the number of grade repetitions, schools attended, chronological and mental ages, intelligence quotients, achievement scores for reading, spelling, and arithmetic computation--all points of interest in the school background of the individual. A typical sheet will be found in the Appendix.

⁶Marion Monroe, Children Who Cannot Read, University of Chicago Press, Chicago, Illinois, 1932, 189

CHAPTER IV

ANALYSIS OF FINDINGS

Objective studies in reading indicate extreme variations in achievement and rate of progress among children. Pupils in the same grade exhibit great diversity in their reading achievement and marked differences exist even among disabled readers. Standard tests showing the range of pupil ability and the extent of individual differences have supplied the basic material upon which the present investigation has been made and from which the tables and charts accompanying this study have been formulated.

Individual differences existing among these disabled readers will be considered below in terms of chronological and mental ages, rate of learning, and reading indices. Varied experiences in regard to repetitions and school transfers will also be taken into account. Further comparisons of regular promotions, grade repetitions, and school transfers in the case of the disabled readers, and of the comparison cases who evidenced no reading disability, will also be considered in this chapter.

Reading disability can be found in both the elementary school and high schools. In the present study of disabled readers, grade placement ranged from first grade to high

school at the time the psychological and educational tests were administered. Table I gives the distribution of these children throughout the grade range.

TABLE I

GRADE PLACEMENT OF DISABLED READERS AT TIME OF EXAMINATION

GRADE	N
9	2
8	6
7	10
6	9
5	21
4	17
3	17
2	13
1	2
Ungraded	3
TOTAL	100

Three of the group were classified by their schools as ungraded. Two of these were in the public school in special classes, while one was in a parish school where she was placed in the third grade room but not required to meet the standards of the class.

It can be seen from Table I that 18% of these disabled readers were found in the upper grades (seventh, eighth, and ninth) included in this study, while the remaining 82% were found in the middle and lower grades. It is probable that many of these disabled readers were advanced from grade to grade in school regardless of a reading deficiency which was recognized several years before referral to the Center.

Disabled readers found in the upper grades may be harder to deal with than those in the lower grades, because they have become depressed by failure or are perhaps resentful at being compelled to attempt what they cannot do. The poor reader has trouble keeping happily occupied in school and therefore he readily becomes inattentive and mischievous. All poor readers have a sense of failure, but this can be dispelled only by giving them an opportunity to experience repeated success through reading material within their level of reading ability.

After considering the grade placement of these disabled readers, it is enlightening to group these children according to the commonly accepted interpretation of the several levels of intelligence as described by Terman.¹ This distribution is presented in Table II.

¹Lewis Terman, The Measurement of Intelligence, Houghton, Mifflin Company, New York, 1916, 79

TABLE II
DISTRIBUTION OF INTELLIGENCE QUOTIENTS
OF 100 DISABLED READERS

I.Q.	DESCRIPTION	N
120-129	Very Superior	10
110-119	Superior	13
100-109	Normal	27
90- 99	Normal	26
80- 89	Dull	17
70- 79	Border-line	7
TOTAL		100
	25th percentile	91
	Median	99.5
	75th percentile	109

It has baffled both parents and teachers to find pupils of high intelligence rated as disabled readers. Durrell says, "Of each four children falling behind in reading, one is likely to be of normal or superior intelligence."² In the cases studied 23% were found to be in the upper brackets

²Donald Durrell, Improvement of Basic Reading Abilities, World Book Company, Yonkers-on-Hudson, New York, 278

(110-129). Much was expected of them because of high intellectual ability. Their reading handicap was often overlooked or attributed to "laziness." Many of these children developed behavior problems because of the confusion and emotional reactions caused by a sense of failure. Parents and teachers alike often think the bright child lazy or rebellious because he does not respond properly to his school work. It often happens that the bright child passes from grade to grade in the primary section because he has been able to learn the work of the grades by rote memory or by developing a good sight vocabulary. Many of these children meet with a reading difficulty when they reach the middle or upper grades. The bright child could no longer conceal his reading disability when the work required really comprehensive discussion on the material read. Superior intelligence combined with facile memory and elementary sight vocabulary may permit him to reach the upper or middle grades before his reading deficiency is fully recognized. The children in many of these cases studied responded promptly to remedial instruction.

It is interesting to note in this group that 53% of the children were in the average range (90-109), while the lower 24% or about one-fourth of the cases ranged from 75-89. These reading disability cases apparently seem to follow fairly well the pattern of a normal distribution.

It is obvious that discussion of intelligence apart from mental age has no direct bearing on reading. The former

is a measure of rate of mental growth, the latter indicates the level of maturity or general ability attained at a given time. Table III shows the mental age distribution of our sample. The total range of mental ages represented in the table below extends from 6-8 to 16-10.

TABLE III
DISTRIBUTION OF MENTAL AGES OF
100 DISABLED READERS

M.A.	N
6-0 to 6-11	2
7-0 to 7-11	5
8-0 to 8-11	10
9-0 to 9-11	9
10-0 to 10-11	29
11-0 to 11-11	13
12-0 to 12-11	12
13-0 to 13-11	12
14-0 to 14-11	3
15-0 to 15-11	2
16-0 to 16-11	3
TOTAL	100
25th percentile	9-10
Median	10-10
75th percentile	12- 4

None of these disabled readers had mental ages below six years and eight months, which would indicate that these children had all reached at least a reading readiness age. Even the youngest child had at least a year's experience in school.

The preceding pages have reported grade placement, intelligence quotients, and mental ages of these disabled readers. It should be remembered that these children were selected on the bases of their reading index. The calculation of the reading index has been stated in an earlier chapter. Table IV shows the distribution of the reading index of these children. The range of the reading index is from .09 to .79.

TABLE IV

DISTRIBUTION OF READING INDICES OF
100 DISABLED READERS

READING INDEX	N
.70-.79	14
.60-.69	21
.50-.59	23
.40-.49	20
.30-.39	18
.20-.29	3
.10-.19	0
.00-.09	1
TOTAL	100
25th percentile	.42
Median	.54
75th percentile	.65

As already stated, a reading index below .80 is a reasonable indication of a degree of reading disability which calls for remedial instruction. It can be seen, that many of these disabled readers were severe reading disability cases. A large number of these children have since been aided by remedial instruction. Patrick who was the most severe dis-

ability case in this study has his story summarized below.

Patrick entered school at six years and six months. He repeated first grade and was passed to the second grade pending examination. Patrick was very unhappy in school. He was much aware of his inability to read. He sought escape from school and his difficulty by truancy. This resulted in the school threatening him to the point of exclusion. His mother was very disturbed about his behavior, so he was brought to the Center for a psychological examination. Tested in September, 1945, at the age of eight years and seven months, he had a mental age of 7-10, yielding an intelligence quotient of 91. During Patrick's examination an attempt was made to administer the Ayres Spelling test, but Patrick was unable to spell even the simplest words. He could not recognize any words on the Gray's oral reading test, or the Metropolitan Primary Reading test. His number concepts seemed to be adequate, although his skill in number combinations was rather weak. There was definite reversals in writing numbers, and this reversal tendency was probably a contributing cause of the reading disability.

Since the results on the Binet test were questioned because of Patrick's inability to read, the Grace Arthur Point Scale of Performance test was administered, resulting in the same score: chronological age 8-7, mental age 7-10, and the intelligence quotient, 91.

Patrick's mother was fortunate in finding an experienced and responsible tutor, who gave the boy six individual lessons a week. After a short period of tutoring, the tutor reported that Patrick was able to write fairly good short sentences. Under this tutorage he experienced some success and thus was helped to overcome feelings of inadequacy and inferiority. With this progress in reading, his social adjustment improved markedly.

Patrick's reading index of .09 would place him in the "non-reader" group. It is evident, nevertheless, that individual and studied instruction in word recognition, phonetic drill, and reading would definitely increase his achievements, thus enabling him to restore his self-confidence and self-respect.

The problem of school placement has taken a prominent place in the schools of today. The housing situation and the further fact that mothers were forced to work during the war time seem to be contributing factors increasing the irregularity in school placement. Parents because of these situations were forced to move in with the grandparents or to move from place to place, thus necessitating many changes in the school life of the child. These frequent changes demanded that the child make new adjustments to his surroundings both in school and at home thus increasing the difficulties already present. Since these situations caused such irregularities in the school placement of the ordinary child, naturally then, among

the clinical cases the frequency of school placement would seem to show greater irregularities. Table V gives a comparative idea of the school placement that has been made in the school life of the disabled readers in this study and in the school life of the comparison group where reading disability was not a conspicuous factor.

TABLE V

DISTRIBUTION OF THE SCHOOL PLACEMENTS
OF 100 DISABLED READERS AND
COMPARISON GROUP OF 100

NO. OF SCHOOL PLACEMENTS	NO. OF DISABLED READERS	NO. OF NORMAL READERS
1	22	36
2	34	33
3	22	13
4	11	11
5	9	4
6	1	1
7	0	1
8	1	1
TOTAL	100	100

Table V shows nearly 78% of the pupils attended more than one school, leaving a very small minority who remained

in one school up to the time of this study. A slight improvement could be seen in the comparison group where 64% had been in more than one school.

This comparison of the normal and retarded readers shows that about 16% more of the disabled group changed from school to school. Such frequent changing could probably be considered a contributing factor in the reading disability of these individuals, especially in the cases where mental immaturity and emotional confusion were already present.

In connection with the number of school placements, it might be well to mention that each change did not necessarily mean that that particular school had not been previously attended, that is to say, some individuals transferred to another school but later re-entered a school they had formerly attended. In order to show the exact number of transfers for both the retarded and normal readers Table VI has been prepared.

TABLE VI

DISTRIBUTION OF SCHOOL PLACEMENTS AND TRANSFERS OF
100 DISABLED READERS AND COMPARISON GROUP OF 100

NO. OF SCHOOL PLACEMENTS	NO. OF DISABLED READERS	NO. OF NORMAL READERS	NO. OF TRANSFERS	TOTAL TRANSFERS	
				DISABLED READERS	NORMAL READERS
1	22	36	0	0	0
2	34	33	1	34	33
3	22	13	2	44	26
4	11	11	3	33	33
5	9	4	4	36	16
6	1	1	5	5	5
7	0	1	6	0	6
8	1	1	7	7	7
TOTAL	100	100		159	126

Among the one hundred disabled readers we find that there have been 159 transfers. Twenty-two per cent of the cases remained stable up to the time of this study; 34% made one transfer; and the remaining 44% had had from two to seven transfers. Among the normal readers, however, 36% remained stable up to the time of this study; 33% made one transfer; and from two to seven transfers took place in the remaining 31%. This comparison shows that 33 retarded readers had

transferred more frequently than the normal readers, and that 14% more of the normal readers had had no transfers, as compared with the disabled readers. These results seem to show that the disabled reader had a much more irregular school history than the normal readers.

It is beyond the scope of the present study to determine whether school transfers were responsible for reading disability. It is probable that some cases were aggravated by these transfers, while in other cases lack of progress prompted transfers. In some cases a transfer was prompted by a desire to have the child's reading disability remedied. In other cases insecurity and confusion required the child to transfer, while in some cases transfers and reading disability were just coincidental. From the data available in these cases it cannot be stated what relationship existed.

In considering the school placement and school transfers of the disabled and normal groups, great irregularities were found among the disabled group. Therefore Table VII was prepared to show the records of grades repeated for each group, distributed according to I.Q. decades. The left-hand figures refer to the disabled readers and the right-hand figures to the comparison groups in each double column.

TABLE VII

DISTRIBUTION OF REPETITION OF GRADES AMONG THE
DISABLED READERS AND NORMAL READERS
ACCORDING TO I.Q. GROUPINGS

I.Q.	REPEATED FIRST GRADE		REPEATED SECOND GRADE		REPEATED OTHER GRADES		REPETITION OF SOME GRADES	
120-129	2	0	0	0	2	0	4	0
110-119	5	0	3	0	3	0	11	0
100-109	8	7	4	0	9	7	21	14
90- 99	10	8	5	3	4	5	19	16
80- 89	12	8	2	2	0	3	14	13
70- 79	5	3	0	0	2	0	7	3
TOTAL	42	26	14	5	20	15	76	46
DISABLED READERS			I.Q.		NORMAL GROUP		I. Q.	
25th percentile			91		25th percentile		90	
Median			99.5		Median		101	
75th percentile			109		75th percentile		108	

It is a commonplace that reading readiness requires a mental age close to six years and six months. Children entering first grade before they are ready to read can scarcely be expected to be ready for promotion at the end of the year. A check up of the disabled readers who repeated first grade confirms this truth. From the data available it was

possible to calculate what had been the mental ages of these children upon their entrance into first grade. Out of the 42 disabled readers repeating first grade, 24 had not reached a mental age of 6-0 on entrance.

We can only conjecture what a particular first grader experiences when he sits an entire year in a classroom where he neither follows nor comprehends the reading material presented. What are his attitudes towards himself? How much discouragement, insecurity and confusion has he developed? What degree of mistrust does he have in himself? How deep is his sense of failure as compared with that of the average child? To what extent does his handicap stand in his way of progressing socially as well as educationally?

This factor of immaturity in first-grade failure can be partly controlled by deferring admission of the mentally immature. Reading readiness tests can be used to discover whether a child is ready to start reading. This would seem to be one important step towards reducing the number of disabled readers in later grades.

Immaturity does not always result in later serious reading disability and it does not explain all reading disability. While repetition was far more frequent among those who appeared later as disabled readers, it was not confined to this group alone. Quite a few repetitions were made by the comparison group, yet serious reading disability did not

appear in their cases. A comparison of our sample of one hundred who were not disabled readers showed that 26% repeated first grade. It is likewise noteworthy that out of the 26, thirteen had entered first grade before they were mentally ready. It would seem that children who repeat first grade, if properly handled and given material within their level of reading ability, would get a solid foundation which would affect all their school lives. To improve a child in any skill, we have to "go back to where he is." If retarded readers are given material well within range of their ability improvement can begin. This gives them a chance to taste the success which they badly need and thus restores their self-confidence. Only thus can they be saved the failure and discouragement which is otherwise in store for them.

As has been stated, the child's inability to read does not restrict him in this subject alone, but in all subjects where reading is required. Upon rather close examination of achievement in spelling and arithmetic, it was found that the child who was ordinarily classified as a disabled reader likewise showed a spelling deficiency. In some instances it was noted that the disabled reader fared favorably in arithmetic computation, but it can be reasonably assumed that in reasoning problems in applied arithmetic, where a knowledge of reading is essential, such an individual would be greatly handicapped. This is in line with Betts' statement that "A learner with typical reading difficulties can be expected

to achieve in arithmetic computation and fall far below his grade level in tests where reading is required."³

Further observations were made to determine the discrepancies existing between standardized silent-reading test results and the results obtained from the Gray's Standardized Oral Reading Paragraphs. This comparison showed that the scores in 46% of the cases were virtually the same, that is to say, the difference was a half grade or less. Another 46 of these children rated higher in silent reading, the difference being from a half grade to two and a half grades. The remaining eight children showed a higher score in oral reading, the range of difference being from a half grade to more than three grades.

The question might be raised here, why nearly six times as many children rated higher scores in silent reading as compared with those whose oral reading scores surpassed their silent. A probable explanation may lie in the wide range of intelligence in this group. The child with good general ability ordinarily is able in a silent-reading test to get meaning from the context, while one who is low in intelligence cannot ordinarily derive much help from the context. On the

³Emmett Betts, The Prevention and Correction of Reading Difficulties, Rowe, Peterson and Company, Evanston, Illinois, 1936, 92

other hand the slow child by much drill and repetition may acquire a sight vocabulary and the mastery of phonics which his brighter brother does not possess.

This explanation would be consistent with the fact that the great majority of this group had normal or superior intelligence. It would be impossible to check this explanation by a correlation procedure for a number of reasons. It would not be significant to compare the discrepancy between oral and silent reading with either mental age or intelligence. Comparison with the reading index would likewise be of doubtful validity especially since so wide a variety of silent reading tests had to be employed with this widely scattered group.

A few typical cases, however, may illustrate without necessarily proving the validity of the explanation.

TABLE VIII

SAMPLE CASES SHOWING THE SHIFTING DISCREPANCY BETWEEN
SILENT AND ORAL READING SCORES, INCLUDING
INTELLIGENCE TEST DATA AND SPELLING
SCORES FOR COMPARISON

C.A.	M.A.	I.Q.	PARAGRAPH MEANING	ORAL READING	SPELLING AVERAGES
10-9	13-2	122	4.8	3.4	3.1
14-5	16-9	120	6.8	4.4	3.3
12-1	12-11	107	5.2	4.0	3.5
10-7	10-8	101	3.9	4.0	2.5
9-1	7-0	77	1.9	2.4	2.2
15-4	8-0	55	3.1	10.1	6.8

The last line in the above table is taken from the study of a mentally handicapped child not included in this study. His scores illustrate what mastery of rote skills can be acquired through long years of patient drill and repetition under favorable conditions.

Because of the wide range of mental ages and grade placements of these disabled readers, it was impossible to administer the same silent reading test to all. The norms of the several tests are not always comparable. Accordingly no correlations are presented between the reading scores and other measures of attainment for this group.

However, uniform tests in oral reading and spelling were administered to all the individuals. It is noteworthy that the comparison of the scores for the entire group in these two skills yielded a correlation coefficient of $\pm .89 \pm .014$.

CHAPTER V

SUMMARY AND CONCLUSIONS

The present investigation was undertaken to determine what relationship exists between the child's school background and his reading disability. The data came from the case histories of one hundred disabled readers. These cases were chosen within a chronological age range of 8-0 to 14-11. Intelligence quotients ranged from 75 to 128. This range of I.Q. was chosen to avoid sampling the feeble-minded in the lower bracket and to include several disabled readers in the upper brackets (110-129). Within these limits the criterion of inclusion was a reading index below .80.

Included in this study were one hundred comparison cases, who evidenced no serious reading disabilities, but whose school history in regard to transfers and grade repetitions were compared with those of the disabled reader.

Grade placement at time of referral for clinical study varied greatly. Serious reading disability was found even in some high school students. No case included in this study showed a mental age below six years and eight months. None had had less than one full year of schooling.

Transfers from school to school were frequent. Seventy-eight per cent of the disabled readers had attended more than one school up to the time of referral; of the comparison

group 64% had had more than one placement. From the data of the present study it cannot be determined whether school transfers were responsible for reading disability or whether reading disability was the cause of the transfer.

Grade repetitions were more frequent with the disabled readers than with the comparison group. Seventy-six per cent of the former repeated some grade, only 46% of the latter. In both groups first grade was the one most frequently repeated.

Tests also proved, rather definitely, that the disabled reader in some instances did favorably in arithmetic computation, but fell far below his grade level in tests where reading was required.

Mental immaturity upon entrance in first grade occurred in both groups but was more frequent among those who appeared later on as disabled readers. It would seem that immaturity upon school entrance does not always result in serious reading disability, however, this factor in first-grade failure could be partly controlled by deferring admission to the mentally immature. This would seem to be one important step towards reducing reading disability. Trying to have all children begin reading at the same time seems to be the chief cause contributing to a reading deficiency. This is especially true when the child is not mentally ready to start reading, which was the case in some of these disabled readers examined. It seems that almost all problems in reading can

be traced to a poor beginning, with difficulties increasing as the child progresses through the grades. Teachers should try to discover early in the child's first year in school the confusion and difficulties existing in the reading process. Special effort should be made to analyze these hindrances and to provide for individual differences, thus giving the child a chance to acquire a background of essential experiences and facility in the use of language.

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APPENDIX

L.C. Tests--Mental C.A. M.A. I.Q. Placement Expectancy

Spelling Ayres Oral

Written

Prev. Reading Tests	Date	Grade	Prev. Reading	Date	Grade
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[illegible]

Notes, Varia

APPROVAL SHEET

The thesis submitted by Sister Mary Jean Loretta Nolan, O.P. has been read and approved by three members of the Department of Psychology.

The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated, and that the thesis is now given final approval with reference to content, form, and mechanical accuracy.

The thesis is therefore accepted in partial fulfillment of the requirements for the Degree of Master of Arts.

January 12, 1949
Date

Charles H. B. O'F.
Signature of Adviser